

CLAIMS

What I claim as my invention is:

1. A test tip device for measuring an analyte in a sample comprising:

a piece of optical fiber with two ends;

a reagent pad containing all the necessary chemicals and enzymes for a specified analysis;

said reagent pad being mounted to one end of said optical fiber;

a detection device comprising: (a) a light emitting source; (b) a housing for engaging the other end of said fiber to said light source; (c) a photo detector to receive light reflected off the reagent pad end of said fiber; (d) a processor to convert the light signal to the analyte concentration, and (e) a display to display the test results.

2. The device of claim 1, wherein the test tip is disposable.

3. The device of claim 1, wherein the reagent pad is a membrane impregnated with dry chemicals and enzymes.

4. The device of claim 1, wherein said reagent pad is a cast polymer which contains all the required chemicals and enzymes for a specified analysis.

5. The device of claim 1, wherein the reagent pad membrane is mounted to the end of said optical fiber by an adhesive.

6. The device of claim 1, wherein the reagent pad membrane is mounted to the end of said optical fiber by ultrasonic welding.

7. The device of claim 1, wherein said optical fiber is made of glass/glass, or plastic/plastic, or glass/plastic.

8. A tubular test tip device for measuring an analyte in a sample comprising:

a piece of micro tubing with two ends;

a reagent pad containing all the necessary chemicals and enzymes for a specified analysis;

said reagent pad being mounted to one end of said tubing;

a detection device comprising: (a) a light emitting source; (b) a fiber optic probe connected to the said light source, (c) a photo detector to receive light reflected off the reagent pad end of said tip; (d) a processor to convert the light signal to the analyte concentration, and (e) a display to display the test results.

9. The device of claim 8, wherein the test tip is disposable.
10. The device of claim 8, wherein the reagent pad is a membrane impregnated with dry chemicals and enzymes.
11. The device of claim 8, wherein the reagent pad membrane is mounted to the end of said optical tubular tip by an adhesive.
12. The device of claim 8, wherein the reagent pad membrane is mounted to the end of said tubular tip by ultrasonic welding.
13. The device of claim 8, wherein said reagent pad is a cast polymer which contains all the required chemicals and enzymes for a specified analysis.
14. The device of claim 8, wherein said fiber optic probe is made of glass/glass, or plastic/plastic, or glass/plastic